

## REMARKS

Claims 11-14, 16-20, 22-34, and 36 were previously presented in this patent application. New claim 37 is added hereby, claims 23 and 26 are amended for proper  
5 dependency, and claim 34 includes a grammatical correction. No new issues are raised by the claim amendments.

All of the previously submitted claims have been rejected under 35 U.S.C. 103 (a) as obvious over Brånemark US patent 5,171,284 in view of Lemos US patent 3,979,829. Applicant respectfully traverses this rejection.

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### **The Brånemark and Lemos References**

Applicant agrees with the Examiner that Brånemark discloses a titanium device comprising a generally cylindrical anchoring portion formed with an insertion end and having an external screw thread, a cavity having a circular cross-section that widens toward  
15 the insertion end and opens out at the insertion end, and a plurality of through-penetrating cutting slots extending from the insertion end that connect the cavity to the outside of the anchoring portion.

Brånemark discloses “one or more holes” which may be directly connected with the radially outer surface of anchoring element 4, with the edges of the holes toward the surface  
20 forming cutting edges to achieve self-tapping when body 5 is screwed into the bone. However he does not disclose any structure whatsoever for such cutting edges or for the walls of the holes (see column 3, lines 47-51).

Brånemark discloses that “slits 8 and 9 may suitably be provided with cutting edges” but does not disclose any structure whatsoever for such cutting edges or for the walls of the  
25 slits (see column 3, lines 63-64).

Applicant also agrees with the Examiner’s statement that “Brånemark fails to disclose the device wherein the cutting edge of the trailing slot wall surface is at an acute angle relative to the outside of the anchoring portion with the radial direction and the trailing slot wall surface sloping obliquely forward from within and outwardly in the direction of rotation  
30 and wherein the leading slot wall surface is parallel to the trailing slot wall surface.” Rather, Brånemark discloses longitudinal slits 8 and 9 the primary purpose of which is to satisfy the

requirement for good deformation of the insertion end of the anchoring element 4 to greatly reduce the risk of concentrated stress. See column 3, lines 54-62 of this reference.

To supply the structure in claim 1 that is missing from Bränemark, the Examiner asserts that “Lemos teaches a device comprising cutting slots (34) connected to a cavity (24)....” However, slots 34 in Lemos are not cutting slots at all, but rather elongated slots or openings provided with trailing edges 37 and wall surfaces 38 inclined so that cooling fluids (water or air) entering the slots are deflected by surfaces 38 into cavity 24 as the tool is rotated in the direction of arrow 36. The purpose of these slots are to enable the work surface of the tooth stump to be flooded with water which is then deflected by surface 38 into cavity 24 in order to dissipate the generated heat (see column 2, lines 36-46 and lines 58-61, and column 4, lines 24-43). Lemos does not disclose any feature of slots 34 that relates to the cutting of bone nor is there any reference to any feature of slots 34 or their trailing edges as constituting a cutting edge.

In Lemos, the cutting of tooth material, which is the object of the disclosed invention, is not carried out by a cutting edge at all but rather by an abrasive process. “Exterior surface 28, as well as interior surfaces 22 and 23, are coated with abrasive matter 31, such as diamond dust” (see column 4, lines 1-3). In use, the abrasive nature of annular surface 28 can be used for initially cutting the tooth in the crown area (see column 4, lines 67-68). Later in the process, the lateral sides of the tooth spike are shaped and formed by the abrasive matter on interior surface 23 of lateral wall 19, and the top of the spike of the tooth stump is ground down by the abrasive matter on interior surface 22 of top wall 16 (column 5, lines 26-31).

#### **Claim 1 Distinguishes Over the References**

Applicant’s claim 1 clearly defines a cutting edge structure which is not disclosed or suggested in Bränemark, as stated by the Examiner. Lemos does not deal with cutting edges of the type defined by Applicant at all. Thus there is nothing in Lemos and Bränemark to suggest that the new and novel cutting edge described in claim 1 would have been obvious to one having ordinary skill in the art at the time of the invention was made.

In view of these facts, Applicant respectfully requests that Examiner reconsider and remove this ground of rejection.

Applicant has presented new claim 37. Support for new claim 37 is found in the specification of the application as published, paragraphs [0003], [0025], and [0026]. The illustrated fixture in Fig. 1 discloses anchoring portion 1 with a length of about 20 mm having external screw thread 3 which is an M6 thread. An M6 thread is a standard thread size and has a nominal major diameter of 6 mm. Thus, in this illustration, the ratio of the length of the anchoring portion to the diameter of the radially outermost portion of the external screw thread is 20/6, thereby supporting the claim language, "greater than three."

Applicant respectfully requests examination of this new claim.

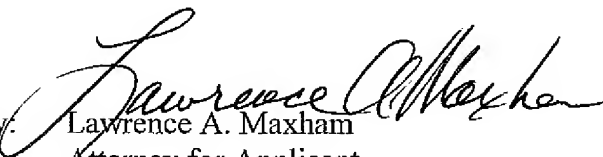
Applicant further requests early allowance and passage of the application to issue.

Should any issues remain unresolved, Examiner Woodall is invited to telephone the undersigned attorney.

Respectfully submitted,

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